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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/669,032	09/25/2000	Ryota Mita	16869P-014900US	3497

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EXAMINER

CHAU, COREY P

ART UNIT PAPER NUMBER

2644

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/669,032	<b>Applicant(s)</b> MITA ET AL.	
	<b>Examiner</b> Corey P. Chau	<b>Art Unit</b> 2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 18-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)     | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 18-19, 21-23, 25-26, and 28-30 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5668337 to Kondo et al. (hereafter as Kondo).

3. Regarding Claim 18, Kondo discloses a melody sound reproducing unit comprising:

an input unit which inputs melody data for a plurality of notes (Fig. 1);

a controller which shifts the entire scale of the melody data inputted by the input unit when a frequency of the inputted melody data is not in a predetermined range (i.e. in the event that a tone falling outside the pitch range defined by the note limiting range data contained in the channel table, the note data is modified by the octave so that the tone falls within the defined pitch range)(Fig. 6; column 15, line 59 to column 16, line 8);

a memory which stores melody data inputted by the input unit when a frequency of the inputted melody data is in the predetermined range, and stores melody data shifted by the controller when the frequency of the inputted melody data is not in the predetermined range (Figs. 1 and 6, column 16, lines 9-11);

Art Unit: 2644

a signal generator for generating an audio signal based on melody data stored in the memory (Fig. 1); and

a speaker (1C) for outputting an audio signal generated by the signal generator.

4. Regarding Claim 19, Kondo discloses the predetermined range is a range between a first and a second frequency (column 9, lines 11-14).

5. Regarding Claim 21, Kondo discloses the melody data includes a first tone data and a second tone data, and wherein the signal generator generates a first audio signal corresponding to the first tone data and a second audio signal corresponding to the second tone data with predetermined timing (Figs. 1 and 2A-B; column 10, line 66 to column 11, line 20).

6. Regarding Claim 22, Kondo discloses the first audio signal and the second audio signal form a chord relation in intervals and scales with each other (column 15, line 59 to column 16, line 8; claim 5).

7. Regarding Claim 23, Kondo discloses a melody sound reproducing unit comprising: an input unit which inputs melody data for two or more notes (Fig. 1); a controller which changes the frequency spectrum of a melody data inputted by the input unit to produce a melody data whose frequency spectrum is in a range between a first frequency and a second frequency when a frequency of the inputted melody data is not in the range (i.e. in the event that a tone falling outside the pitch range defined by the note limiting range data contained in the channel table, the note data is modified by the octave so that the tone falls within the defined pitch range)(Fig. 6; column 15, line 59 to column 16, line 8); a memory which stores melody data inputted by the input unit when

Art Unit: 2644

a frequency of the inputted melody data is in the range, and stores melody data shifted by the controller when the frequency of the inputted melody data is not in the range (Figs. 1 and 6, column 16, lines 9-11); a signal generator for generating an audio signal based on melody data stored in the memory; and a speaker (1C) for outputting an audio signal generated by the signal generator.

8. Claim 25 is essentially similar to Claim 18 and is rejected for the reasons stated above apropos to Claim 18.

9. Claim 26 is essentially similar to Claim 19 and is rejected for the reasons stated above apropos to Claim 19.

10. Claim 28 is essentially similar to Claim 21 and is rejected for the reasons stated above apropos to Claim 21.

11. Claim 29 is essentially similar to Claim 22 and is rejected for the reasons stated above apropos to Claim 22.

12. Claim 30 is essentially similar to Claim 23 and is rejected for the reasons stated above apropos to Claim 23.

13. Claims 18-19, 21, 23, 25-26, 28, and 30 are rejected under 35 U.S.C. 102(a) as being anticipated by U.S. Patent No. 5973252 to Hildebrand.

14. Regarding Claim 18, Hildebrand discloses a melody sound reproducing unit comprising:

an input unit which inputs melody data for a plurality of notes (abstract; Fig. 1);

a controller which shifts the entire scale of the melody data inputted by the input unit when a frequency of the inputted melody data is not in a predetermined range (Fig. 1; column 5, lines 60-64; column 6, line 64 to column 7, line 8);

a memory which stores melody data inputted by the input unit when a frequency of the inputted melody data is in the predetermined range, and stores melody data shifted by the controller when the frequency of the inputted melody data is not in the predetermined range (Fig. 1);

a signal generator for generating an audio signal based on melody data stored in the memory (Fig. 1); and

a speaker (12) for outputting an audio signal generated by the signal generator (Fig. 1).

15. All elements of Claim 19 are comprehended by Claim 18. Claim 19 is rejected for the same reasons stated above apropos to Claim 18.

16. Regarding Claim 21, Hildebrand discloses the melody data includes a first tone data and a second tone data, and wherein the signal generator generates a first audio signal corresponding to the first tone data and a second audio signal corresponding to the second tone data with predetermined timing (abstract; Fig. 1; column 5, lines 60-64; column 6, line 64 to column 7, line 8).

17. Regarding Claim 23, Hilderbrand discloses a melody sound reproducing unit comprising:

an input unit which inputs melody data for two or more notes (Fig. 1);

Art Unit: 2644

a controller which changes the frequency spectrum of a melody data inputted by the input unit to produce a melody data whose frequency spectrum is in a range between a first frequency and a second frequency when a frequency of the inputted melody data is not in the range Fig. 1; column 5, lines 60-64; column 6, line 64 to column 7, line 8;

a memory which stores melody data inputted by the input unit when a frequency of the inputted melody data is in the range, and stores melody data shifted by the controller when the frequency of the inputted melody data is not in the range (Fig. 1);

a signal generator for generating an audio signal based on melody data stored in the memory (Fig. 1); and

a speaker (12) for outputting an audio signal generated by the signal generator (Fig. 1).

18. Claim 25 is essentially similar to Claim 18 and is rejected for the reasons stated above apropos to Claim 18.

19. Claim 26 is essentially similar to Claim 19 and is rejected for the reasons stated above apropos to Claim 19.

20. Claim 28 is essentially similar to Claim 21 and is rejected for the reasons stated above apropos to Claim 21.

21. Claim 30 is essentially similar to Claim 23 and is rejected for the reasons stated above apropos to Claim 23.

***Claim Rejections - 35 USC § 103***

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

23. Claims 20, 24, 27, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5668337 to Kondo.

24. Regarding Claims 20, 24, 27, and 31, Kondo does not expressly disclose the first frequency is 400 Hz and the second frequency is 8 kHz. However, the Examiner takes Official Notice that it would have been obvious to one having ordinary skill in the art to provide any desired frequency range in order for the speaker to produce a good sound quality, such as the first frequency is 400 Hz and the second frequency is 8 kHz. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify Kondo to utilized any desired frequency range in order for the speaker to produce a good sound quality, such as the first frequency is 400 Hz and the second frequency is 8 kHz.

25. Claims 20, 24, 27, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5973252 to Hildebrand.

26. Regarding Claims 20, 24, 27, and 31, Hildebrand does not expressly disclose the first frequency is 400 Hz and the second frequency is 8 kHz. However, the Examiner takes Official Notice that it would have been obvious to one having ordinary skill in the



Art Unit: 2644

art to provide any desired frequency range in order for the speaker to produce a good sound quality, such as the first frequency is 400 Hz and the second frequency is 8 kHz. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify Hildebrand to utilized any desired frequency range in order for the speaker to produce a good sound quality, such as the first frequency is 400 Hz and the second frequency is 8 kHz.

### ***Response to Arguments***

27. Applicant's arguments filed 11/23/2005 have been fully considered but they are not persuasive.

28. With respect to Applicant's argument on page 6, stating that "Kondo et al. discloses shifting only one note (event) having a frequency outside of the predetermined range. Col. 15, line 59 to col. 16, line 8, step 66 describes a note conversion process in which "if the channel switch data indicates that no tone should be generated in the current chord root and/or type, this note will not be sounded." As only one note is being shifted, Kondo et al. do not show shifting the entire scale of the melody data", has been noted. However, the Examiner respectfully disagrees. Kondo discloses "In the event that a tone falling outside the pitch range defined by the note limiting range data contained in the channel table, **the note data is modified by the octave** so that tone falls within the defined pitch range". Kondo discloses the note data being modified, not a note. Therefore, Kondo discloses shifting the entire scale of the melody data.

Art Unit: 2644

29. With respect to Applicant's argument on page 7, stating that "For similar reasons as discussed above, Kondo et al. do not disclose the features as claimed in which the frequency spectrum of a melody data is changed", has been note. However, the Examiner respectfully disagrees. See above argument.

30. With respect to Applicant's argument on page 8, stating that ""For similar reasons as discussed above, Kondo et al. do not disclose the features as claimed in which there is shifting of the entire scale of the inputted melody", has been noted. However, the Examiner respectfully disagrees. See above argument.

31. With respect to Applicant's argument on page 8, stating that ""For similar reasons as discussed above, Kondo et al. do not disclose the features changing all frequency components of inputted melody data to produce melody data whose frequency components fall within a range between a first and second frequency", has been noted. However, the Examiner respectfully disagrees. See above argument.

### ***Conclusion***

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6121533 to Kay discloses a method and apparatus for generating random weighted musical choices.

33. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

Art Unit: 2644

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

34. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey P. Chau whose telephone number is (571)272-7514. The examiner can normally be reached on Monday - Friday 9:00 am - 5:00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on (571)272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2644

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 20, 2006

CPC



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